

LISTING OF ALL CLAIMS

1 Claim 1. (currently amended) A method for a controlled release
2 of structures comprising:

3 a) forming one or more trenches in a layer of device
4 material;

5 b) filling one or more selected trenches with depositing an
6 etch-stop material in one or more selected trenches to
7 form one or more etch-stop trenches;

8 c) defining one or more structures between the selected
9 trenches; and

10 d) etching one or more portions of the device layer between
11 the etch-stop trenches to release the structures, wherein
12 the etching does not etch the etch-stop material.

1 Claim 2. (original) The method of claim 1, wherein b) includes
2 depositing etch-stop material over the surface of the device
3 layer.

1 Claim 3. (original) The method of claim 2 wherein c) includes
2 forming one or more openings in the etch-stop material that
3 has been deposited over the surface of the device layer.

1 Claim 4. (original) The method of claim 2, wherein the etching
2 undercuts one or more portions of the etch-stop material
3 that has been deposited over the surface of the device
4 layer.

1 Claim 5. (original) The method of claim 1 where the layer of
2 device material is disposed between two layers of etch-stop
3 material.

1 Claim 6. (original) The method of claim 1, wherein the device
2 layer includes one or more layers of a silicon-on-insulator
3 (SOI) substrate.

1 Claim 7. (original) The method of claim 1, wherein the device
2 layer is a layer of glass, quartz or oxide.

1 Claim 8. (original) The method of claim 1, wherein d) includes a
2 wet etch process.

1 Claim 9. (original) The method of claim 1, wherein d) includes a
2 dry etch process.

1 Claim 10. (previously presented) The method of claim 1, further
2 comprising: forming a structural layer proximate one or more
3 exposed areas of the device layer.

1 Claim 11. (original) The method of claim 10, wherein the etch
2 process in d) does not etch the structural layer.

1 Claim 12. (original) The method of claim 10, further comprising
2 releasing one or more portions of the structural layer.

1 Claim 13. (original) The method of claim 10, wherein the etch
2 process in d) releases one or more portions of the structural
3 layer.

1 Claim 14. (original) The method of claim 10, wherein the
2 structural layer includes one or more structures that are
3 formed directly on top of the etch-stop layer.

1 Claim 15. (original) The method of claim 14, wherein the
2 structural layer contains two or more sub-layers.

1 Claim 16. (currently amended) A process for forming structures
2 comprising:

3 i) forming one or more trenches in a layer of device
4 material;

5 ii) filling one or more selected trenches with an etch-stop
6 material to form one or more etch-stop
7 trenches in selected trenches to define one or more
8 structures;

9 iii) masking a surface of the layer of device material to
10 expose one or more selected areas of device material that
11 border one or more of the etch-stop trenches; and

12 iv) forming one or more structures on one or more of the
13 selected areas of the device material that were exposed;
14 and
15 ~~iv)~~v) etching one or more of the selected areas of the device
16 layer to release the structures, wherein the etching does
17 not etch the etch-stop material.

1 Claim 17. (withdrawn) A comb structure comprising

2 a) one or more static comb fingers

3 b) one or more movable comb fingers that are movable with
4 respect to the static comb fingers; wherein the static
5 comb fingers, the movable comb fingers, or both are
6 formed by:

7 i) forming one or more trenches in a layer of device
8 material;

9 ii) depositing an etch-stop material in selected trenches
10 to define one or more structures

11 iii) masking a surface of the layer of device material to
12 expose one or more selected areas of device material
13 that border one or more of the selected trenches; and

14 iv) etching one or more of the selected areas of the
15 device layer to release the structures, wherein the
16 etching does not etch the etch-stop material.

1 Claim 18. (withdrawn) The comb structure of Claim 17 wherein both
2 the static comb fingers and the movable comb fingers are
3 formed on the same level.

1 Claim 19. (withdrawn) The comb structure of Claim 17 wherein the
2 movable comb fingers are disposed above the static comb
3 fingers.

1 Claim 20. (withdrawn) A MEMS device, comprising one or more
2 structures, wherein the structures have been formed by:
3 i) forming one or more trenches in a layer of device material;
4 ii) depositing an etch-stop material in selected trenches to
5 define one or more structures;

6 iii) masking a surface of the layer of device material to
7 expose one or more selected areas of device material that
8 border one or more of the selected trenches; and
9 iv) etching one or more of the selected areas of the device
10 layer to release the structures, wherein the etching does
11 not etch the etch-stop material.

1 Claim 21. (withdrawn) The MEMS device of claim 20, wherein the
2 structures comprise one or more comb fingers.

1 Claim 22. (withdrawn) The MEMS device of claim 20, wherein the
2 structures include one or more electrostatic actuators.

1 Claim 23. (previously presented) The method of claim 10, wherein
2 the structural layer is protected by one or more etch-stop
3 layers.

1 Claim 24. (previously presented) The method of claim 16, wherein
2 one or more of the structures include a device layer
3 protected by one or more etch-stop layers.

1 Claim 25. (previously presented) The device of claim 20, wherein
2 one or more of the structures comprises a portion of a
3 device layer bounded by one or more etch stop layers.